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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/537,538	09/15/2005	Ian Richard Matthews	003301-231	4769
21839 7590 07/14/2009 BUCHANAN, INGERSOLL & ROONEY PC			EXAMINER	
POST OFFICE	BOX 1404	DESAI, RITA J		
ALEXANDRIA, VA 22313-1404			ART UNIT	PAPER NUMBER
			1625	
			NOTIFICATION DATE	DELIVERY MODE
			07/14/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ADIPFDD@bipc.com

	Application No.	Applicant(s)					
Office Action Occurrence	10/537,538	MATTHEWS ET AL.					
Office Action Summary	Examiner	Art Unit					
	Rita J. Desai	1625					
The MAILING DATE of this communication appears on the cover sheet with the correspondence address Period for Reply							
A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION. - Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication. - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication. - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).							
Status							
1)⊠ Responsive to communication(s) filed on <u>31 Ma</u>	arch 2009						
	action is non-final.						
	, 						
closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213.							
ologica in addordance with the practice and i	x parte Quayle, 1000 O.B. 11, 40	0.0.210.					
Disposition of Claims							
4)⊠ Claim(s) <u>1-7 and 9-21</u> is/are pending in the application.							
4a) Of the above claim(s) <u>9,10,17 and 18</u> is/are withdrawn from consideration.							
5) Claim(s) is/are allowed.							
6)⊠ Claim(s) <u>1-7,11-16,19-21</u> is/are rejected.							
7) Claim(s) is/are objected to.	•						
8) Claim(s) are subject to restriction and/or	election requirement.						
	·						
Application Papers							
9)☐ The specification is objected to by the Examiner.							
10)☐ The drawing(s) filed on is/are: a)☐ accepted or b)☐ objected to by the Examiner.							
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).							
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).							
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.							
Priority under 35 U.S.C. § 119							
 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) Some * c) None of: 1. Certified copies of the priority documents have been received. 2. Certified copies of the priority documents have been received in Application No 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received. 							
Attachment(s)	4) 🔲 Intonious Comment	(PTO 412)					
Notice of References Cited (PTO-892) Notice of Draftsperson's Patent Drawing Review (PTO-948)	4)						
3) Information Disclosure Statement(s) (PTO/SB/08)	5) Notice of Informal P						
Paper No(s)/Mail Date 6) L Other:							

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DETAILED ACTION

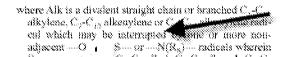
Applicants have not amended the claims to the elected group. Y being a N group.

Applicants have elected Group I of the restriction, claims 1-7,11-16, 19-21 drawn to formula I wherein Y is N.

Response to arguments

The rejection of claims 1-7, 11-16, 19-21, under 35 USC 102 over Matthews et al 7291612 and 7081456 has been withdrawn but modified to a 103 rejection. The reference clearly teaches the compounds generically. Applicants argue that Z is always a carboxylic acid or an ester and the prior art has it always connected to an N . This is incorrect. The prior art '612 on columns 55 and 56, has various definitions. R4 can be NR7C=OR6 . R6 can be alkyl-Q. See claim 8 wherein Q is -COOCH3.

First of all the alkyl itself may be interrupted by heteroatoms, see column 56.



and Q can be an ester.

This would read on the compounds when X is a NHCOCH2-O-CH2 and Z is an ester.

Thus the arguments presented by the applicants is not convincing.

The rejection of the claims 1-7,11-16, 19-21 under ODP over 7291612, 7081456 still stands as applicants have not provided a TD over these patents..

The rejection of the claims 1-7,11-16,19 and 20 under 35 USC 103 over Bjork et al WO 03/004495, US 6642249 still stands. Even though applicants may have amended the claims to have R2 to be substituted cycloalkyl and optionally substituted C7 cycloalkyl

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and phenyl, the substituent is an alkyl, and H v alkyl is a prima facie obvious modification.

So the examiner has maintained all the rejections and made this action FINAL.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-7, 11-16, 19 - 21 are rejected under 35 U.S.C. 103(a) as being obvious over by US 7291612 and US 7081456. Mattews et al .

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by:

(1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or

(3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance

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with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(l)(1) and § 706.02(l)(2).

See claims of the US 7291612

1. A compound of firmula (i) or a pharmaceutically or vascrinarily acceptable salt thereof:

wherein

B₁ and R₂ independently represent H; F; Cl; Hr; ····NO₂; ····CN; C₃·C_n alkyl optionally substituted by F or Cl; or C₄·C_n alkony optionally substituted by F;

 R_2 represents H. or optimally substituted $C_3 \cdot C_8$ alkyl, $C_3 \cdot C_8$ cycloalkyl or optimally substituted phenyl:

Y represents -O, -S, N-exide, or $-N(R_s)$, wherein R_s represents H or C_1 , C_2 alkyl;

X represents a bond or a divolent C_t - C_a alkylene radical; R_a representsNR₂C(....O)R_a,NR₂C(....O)OR_a,NRC(....O)NHR_a or ...NRC(....S)NHR_a wherein:

when R_s represents —NR_sC(=O)R_s or —NR_sC(=O)

OR_s, R_s represents H_s or a radical of formula

...(Aik), Q wherein b is 0 or 1 and Q represents H_s

...(T_s).—OH_s.—SH_s.—NR_sR_s wherein each R_s may
be the same or different; as enter group; or an optionally
substituted phenyl, C_sC_s cyclestkyl, C_sC_s, cyclestkyl
enyl or heterocyclic ring having from 5 to 8 ring atoms;

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- where Alk is a divalent straight chain or branched $C_3 \cdot C_{12}$ alkylene, $C_2 \cdot C_{12}$ alkenylene or $C_2 \cdot C_{12}$ alkynylene radical which may be interrupted by one or more non-adjacent $-O_2 \cdot S_2 \cdot C_3 \cdot N(R_3)$ —redicals wherein R_3 represents H or $C_1 \cdot C_4$ alkyl, $C_2 \cdot C_4$ alkenyl, $C_3 \cdot C_4$ alkynyl, or $C_3 \cdot C_4 \cdot C_4$ alkynyl, or $C_3 \cdot C_4 \cdot C_5 \cdot C_5 \cdot C_6$ alkynyl, and
- R, represents H or C₁-C₈ alkyl; or when taken together with the atom or atoms to which they are attached R₆ and R₇ form an optionally substituted heteroxyclic ring having from 5 to 8 ring atoms.
- A compound as claimed in claim 1 wherein R₁ is B, F, Ci. methyl or methoxy.
- A compound as claimed in claim I wherein R₂ is H, methyl, eyelogropyl, phenyl, or fluoro-, chloro-, methyl-, or methoxy-substituted phenyl.
- A compound as claimed in claim 1 wherein R₃ is H, F, Ci, methyl, or methoxy.
- A compound as claimed in claim 1 wherein Y is —O—,
 ar —N(R₃)— wherein R₃ represents H or methyl.
- A compound as claimed in claim 1 wherein X is a bond, or a —CH₂— or —CH₂CH₂— radical.
- 7. A compound as claimed in claim 1 wherein R₄ represents —NR₂C(—O)R₈, —NR₂C(—O)OR₉, —NHC(—O)NHR₅ or —NHC(—S)NHR₉ wherein
- when R_a represents ... NR_zC(....O)R_n or NR_zC(....O) OR_n, R_d is H or a radical of formula Alk_z-Q wherein b is 6 or 1 and
- Aik is a (CH₂)_n —, CH((CH₂)_nCH₃)(CH₂)_n —, —CR ((CH₂)_nCH₃)((CH₂)_nCH₃)(CH₂)_n —, —(CH₂)_n —O (CH₂)_n —O —(CH₂)_n —, radical where n is 1, 2, 3 or 4 and m and p are independently 0, 1, 2, 3 or 4, and Q represents H. —OM, —COCCH₃, phenyl, cyclopropyl, cyclopenyl, cyclobaxyl, pyridyl, firryl, thicayl, or oxazolyl, and
- when R_{*} represents —NHC(=O)NHR₆ or —NHC(=S)

 NHR₆, R₅ is a radical of formula —Alk₆-Q wherein
 b is 1 and
- Alk is a (CH₂), —, —CH((CH₂), (CH₃), —, —CH ((CH₂), CH₃)((CH₂), CH₃)(CH₂), —, —(CH₂), —O— (CH₂), —, or —(CH₂), —O—(CH₃), —O—(CH₃), midical, where a is 1, 2, 3 or 4 and m and p are independently 0, 1, 2, 3 or 4, and Q represents —OH, —COOCH₃, phenyl, cyclopropyl, cyclopentyl, cyclobertyl, pyridyl, furyl, thisnyl, ar oxazolyl, and
- R₂ is H₂ or when taken together with the nitrogen atom to which they are attached R₂ and R₂ firms a pyrrolidine-2-one or pyrrolidine-2.5-dione ring.
- 8. A compound as claimed in claim 1 wiserein R, is H, F, or Cl; R₂ is H; B₃ is H, F, or Cl; Y is —NH—; X is a bond; and R₄ represents —NR.C(—O)R₈, —NR₂C(—O)OR₈ or —NHC(—O)NHR wherein:
 - when R₄ represents —NR₂C(—O)R₅ or —NR₂C(—O) OR₅, R₆ is H or a radical of formula —Alk₄-Q wherein b is 0 or 1 and
 - Alk is a —(CH₂)_n—, —CH(CH₂)_nCH₃)(CH₂)_n—, —CH((CH₂)_nCH₃)((CH₂)_pCH₃)(CH₂)_n—, —(CH₂)_p— O—(CH₂)_n—, or —(CH₂)_n—O—(CH₂)_n—O— (CH₂)_n—, radical where n is 1, 2, 3 or 4 and m and p are independently 0, 1, 2, 3 or 4, and Q represents H₁—OH, —COCCH₂, phenyl, cyclopropyl, cyclopenyl, cycloboxyl, pyridyl, frayl, thionyl, or oxazolyl, and
 - when $B_{\bf x}$ represents NHC(>>+O)MHR $_{\rm o}$ R $_{\rm o}$ is a radical of formula —Alk $_{\rm o}$ Q wherein
 - b is 1 and

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And US 7081456.

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1. A compound of formula (i) or a pharmaceutically or veterinarily acceptable salt thereof:

wherein

R, and R₃ independently represent H; F; Cl; Br; ---NO₃; –CN; C_4 – C_6 alkyl optionally substituted by F or Ci; or C₁-C₆ altoxy optionally substituted by F;

R, represents H, or optionally substituted C, -C, alkyl, Cy-Cy cyclealkyl or optionally substituted planyl;

Y represents --- O---, --- S---, N-oxide, or --- N(R_s)--wherein R_s represents H or C_1 – C_8 affeyl;

X represents a bond or a divalent $C_1 - C_2$ alkylene materal; R_s represents — $C(==0)NR_gR_s$, wherein

 \mathbb{R}_d represents a radical of formula -(Alk),-Q wherein b is

Alk is an optionally substituted divident straight chain or branched $C_i \cdot C_{i2}$ alkylense, $C_2 \cdot C_{i2}$ alkenylens or C_2 C_{12} alkynylene radical which may be interrupted by one or more non-adjacent — O—, — S— or — $N(R_n)$ radicals wherein \mathbb{R}_8 represents H or $C_3\text{--}C_4$ alkyl, $C_2\text{--}C_4$ alkenyi, C₂-C₄ sikynyi, or C₂-C₅ cyclosikyi, and

Q represents $H_1^* - CF_{s^*} - CH_1^* - SH_1^* - NR_{s}R_{s}$ wherein each R_s may be the some or different; an ester group; or an optionally substituted phenyl, C₃-C, cycloalkyl, C₅-C₇ cyclosikenyl or hetenocyclic ring having from 5 to 8 ring atoms; and

 R_2 represents H or C_2/C_6 alkyl; or when taken together with the atom or atoms to which they are attached R_s and R, form an optionally substituted beteroxyclic ring having from 5 to 8 ring atoms.

2. A compound as claimed in claim I wherein R, is H, F, Cl, methyl or methoxy.

3. A compound as claimed in claim 1 wherein R, is H, methyl, methoxy, cyclopropyl, phenyl, or fluoro-, chloro-, methyl, or methoxy-substituted phenyl.

4. A compound as claimed in claim I wherein R, is H, F. Cl, methyl, or methoxy.

5. A compound as claimed in claim 1 wherein Y is --O---. -S, or $-N(R_s)$ wherein R_s represents if or methyl.

6. A compound as claimed in claim I wherein X is a bond, or a -- CH2--- or -- CH2CH2-- radical.

7. A compound as claimed in claim 1 wherein R_a represents --- C(--- O)NHR₅, wherein R₆ is a radical of formula -Alk_k-Q wherein

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The prior art '612 on columns 55 and 56, has various definitions. R4 can be NR7C=OR6

. R6 can be alkyl-Q. See claim 8 wherein Q is -COOCH3.

First of all the alkyl itself may be interrupted by heteroatoms, see column 56.

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where Alk is a divolent straight chain or branched C<sub>1</sub>-C<sub>2</sub> alkerylene or cal which may be interrepted some or more non-adjacent—O S—or—N(R<sub>2</sub>)—radicals wherein
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and Q can be an ester.

This would read on the compounds when X is a NHCOCH2-O-CH2 and Z is an ester.

The generic teaching is there and hence it would be obvious to modify the claims to obtain the claims of the invention. The prior art teaches the R2 to be optionally substituted phenyl and that is what applicants claim read. Compounds are very similar and the difference is in the X and Z position and the a finite number of options are given in the prior art so it would be obvious to modify the compounds using the given variables to obtain the compounds of the invention.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either

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is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-7, 11-16, 19-21 are rejected on the ground of nonstatutory double patenting over claims 1-8 of U. S. Patent No. 7291612, and claims 1-7 of US 7081456

Claims 1-7, 11-16, 19-21 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-8, of U.S. Patent No. US 7291612 and claims 1-7 of US Patent No. 7081456.. Although the conflicting claims are not identical, they are not patentably distinct from each other because there is overlapping subject matter.

See rejection above.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-7, 11-16, 19 -21 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 03/004495 (filing date) Bjork et al. US 6642249. (July 2001)

Applicants claims are drawn to compounds and pharmaceutical compositions of the formula

wherein Z is a COOH or an

ester thereof., R2 is an optionally substituted cycloalkyl or a phenyl

Scope & Content of Prior Art MPEP 2141.01

WO 03/004495 Bjork et al teaches compounds of the formula

Y is a NR4, R2 is a H or a lower alkyl.

(wherein lower alkyl meaning includes cyclic alkyl groups having 1-6 carbon atoms (see line 9 and 10 page 4 of the reference.

(I)

Difference between Prior Art and the claims MPEP 2141.02

Even though WO '495 Bjork et al teaches the same core of the same use, it generically teaches R2 being a cycloalkyl. Applicants compounds now have the cycloalkyl to be substituted. The substituents can be an alkyl also.

Prima Facie Obviousness, Rational and Motivation MPEP 2142-2413

Bjork et al generically teaches the same core with Z being a COOH or its ester.

Even though no species have been made the teaching that a cycloalkyl ring can be present at the R2 substitution and still retain the properties. Thus motivating a person of skill in the art to <u>substitute</u> a carbocyclic ring for R2 (cycloalkyl or a phenyl) and still have some expectation of success that the compounds would have activity. KSR International v Telflex Inc. In the absence of unexpected results it is prima facie obvious.

Claim Objections

Claim1 has X to be NH(CO)C1-5alkyl objected to because of the following informalities: It cannot be seen where Z would be attached as all the valency are ful. Appropriate correction is required.

Conclusion

Claims 1-7, 11-16, 19 and 20,21 are not allowable.

Claims 9, 10, 17, 18 are withdrawn as non-elected.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the

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advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rita J. Desai whose telephone number is 571-272-0684. The examiner can normally be reached on Monday - Friday, flex time..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janet Andres can be reached on 571-272-0867. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Rita J. Desai/ Primary Examiner, Art Unit 1625

July 8, 2009